

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A membrane having an open-nanoporous morphology producible by shaping a polymer blend, loading the polymer blend with a blowing foaming gas at a superatmospheric pressure, foaming the foaming gas loaded polymer blend at a gas concentration within the polymer blend above a critical gas concentration and at a temperature below a critical temperature, but above the glass transition temperature of the polymer blend/gas mixture and finally stabilizing into a foam structure, said polymer blend being a homogeneous hydrophilic polymer blend having a hydrophilicity that allows spontaneous wetting of the membrane surface with blood, plasma, or other aqueous solutions, comprising components including, at least one hydrophilic polymer and at least one hydrophobic polymer, wherein the polymer blend ~~and the block-copolymer~~ has a solubility relating to the used blowing foaming gas above the critical gas concentration, and the glass transition temperature of the components of the polymer blend are not more different than 150°C.

2. (Previously Presented) A membrane according to claim 1, wherein said membrane is foamed at a temperature at least 10°C below the critical temperature.

3. (Currently Amended) A membrane according to claim 1 or 2, wherein said membrane is foamed above a critical gas concentration, said critical concentration being at least 40cm³ (STP)/cm³ of the polymer blend.

4. (Previously Presented) A membrane according to claim 1, wherein the polymer blend comprises an amorphous or semi-crystalline component.

5. (Currently Amended) A membrane according to claim 1, wherein the polymer blend after shaping is charged with the blowing foaming gas at a temperature below the glass transition temperature of the polymer blend/gas mixture and is then foamed by increasing the temperature to above the glass transition temperature of the polymer blend/gas mixture, but below the critical temperature of the polymer blend/gas mixture.

6. (Currently Amended) A membrane according to claim 1, wherein after shaping at a temperature above the glass transition temperature of the polymer blend/gas mixture but below the critical temperature of the polymer blend/gas mixture, the mixture is charged with the blowing foaming gas and foamed by a pressure decrease.

7. (Currently Amended) A membrane according to claim 1, wherein before shaping the polymer blend/gas mixture, said membrane is fed with the blowing foaming gas into an extrusion tool by a pressure decrease, and is foamed within said extrusion tool or before exiting from said extrusion tool at a temperature above the glass transition temperature of the polymer blend/gas mixture but below the critical temperature.

8. (Currently Amended) A membrane according to claim 1, wherein said blowing foaming gas is carbon dioxide.

9. (Previously Presented) A membrane according to claim 1, wherein the foam structure after foaming is stabilized by chilling.

10. (Previously Presented) A membrane according to claim 1, wherein said hydrophobic polymer is one of polysulfone, polyethersulfone, polyetherimide, polycarbonate, or any mixture thereof.

11. (Previously Presented) A membrane according to claim 1, wherein said hydrophilic polymer is one of polyvinylpyrrolidone, sulfonated polyethersulfone, and polyethyloxazoline, or at least one functionalized polysulfone, polyethersulfone, polyetherimide, or polycarbonate, or any mixtures thereof.

12. (Previously Presented) A membrane according to claim 1, wherein the components of the polymer blend have glass transition temperatures, said glass transition temperatures being similar.

13. (Canceled)

14. (Previously Presented) A membrane according to claim 1, wherein said membrane is a flat membrane, a hollow fibre membrane, or a monofilament membrane.

15. (Canceled)

16. (Currently Amended) A membrane according to claim 1 or 2, wherein the membrane is foamed at a critical gas concentration, said critical gas concentration being at least $43 \text{ cm}^3 \text{ (STP)/cm}^3$ of the polymer blend.

17. (Currently Amended) A membrane according to claim 1 or 2, wherein the membrane is foamed at a critical gas concentration, said critical gas concentration being at least $45 \text{ cm}^3 \text{ (STP)/cm}^3$ of the polymer blend.

18. (Currently Amended) A membrane according to claim 1 or 2, wherein the membrane is foamed at a critical gas concentration, said critical gas concentration being at least $47 \text{ cm}^3 \text{ (STP)/cm}^3$ of the polymer blend.

19. (Previously Presented) A membrane according to claim 9, wherein said foam structure is chilled in an ethanol/water mixture.

20-21. (Canceled)

22. (Previously Presented) A membrane according to claim 1, wherein the components of the polymer blend have glass transition temperatures, said glass transition temperatures being within 100°C of one another.

23. (Canceled)